

**From:** [Turner, Philip](#)  
**To:** [Smith, Terry](#)  
**Subject:** Re: ELRN inquiry  
**Date:** Friday, February 17, 2017 2:08:53 PM

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Good to know... Thanks!

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**From:** Smith, Terry  
**Sent:** Friday, February 17, 2017 1:54 PM  
**To:** Turner, Philip  
**Subject:** RE: ELRN inquiry

Usually NIOSH and OSHA develop methods for a specific purpose, and it is usually for worker protection purposes. So the detection limit listed in either NIOSH or OSHA is dependent upon what they were trying to accomplish with their method. I don't think any of the methods try to define what the absolutely lowest detection level is for the method. And some of the methods are basically the more air you collect, the lower the detection limit.

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**From:** Turner, Philip  
**Sent:** Friday, February 17, 2017 2:17 PM  
**To:** Smith, Terry  
**Subject:** Re: ELRN inquiry

OK, Thanks! I'm not an analytical chemist, but I leaned toward OSHA on this site because it appeared to have a slightly lower detection limit.

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**From:** Smith, Terry  
**Sent:** Friday, February 17, 2017 12:53 PM  
**To:** Turner, Philip  
**Subject:** RE: ELRN inquiry

When we were searching for labs, we just asked if they could analyze phosphine at less than 0.1 ug/m<sup>3</sup>. We did not specify the method.

SWRI came back and said they performed the NIOSH method. I don't necessarily have enough specific experience with phosphine, so not sure if one method is better than another. It may come down to which is the better of the sampling procedure. The NIOSH captures phosphine on an absorbent tube while OSHA is on a treated filter. So the collection media may be the important factor. Can the filter handle 400 liters of air before there is breakthrough on the filter. I just don't know.

Terry

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**From:** Turner, Philip  
**Sent:** Friday, February 17, 2017 1:34 PM  
**To:** Smith, Terry <[Smith.Terry@epa.gov](mailto:Smith.Terry@epa.gov)>  
**Subject:** Re: ELRN inquiry

Thanks, Terry!!

I'm also curious if you guys saw any particular advantage of using NIOSH 6002 rather than OSHA 1003.

Phil

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**From:** Smith, Terry

**Sent:** Friday, February 17, 2017 12:16 PM

**To:** Turner, Philip

**Subject:** RE: ELRN inquiry

Hi Phil:

It is 322 liters. I have attached the info the lab sent us.

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**From:** Turner, Philip

**Sent:** Friday, February 17, 2017 12:59 PM

**To:** Smith, Terry <[Smith.Terry@epa.gov](mailto:Smith.Terry@epa.gov)>; Enders, Jhana <[Enders.Jhana@epa.gov](mailto:Enders.Jhana@epa.gov)>

**Cc:** Kaelin, Lawrence <[Kaelin.Lawrence@epa.gov](mailto:Kaelin.Lawrence@epa.gov)>; Kudarauskas, Paul <[Kudarauskas.Paul@epa.gov](mailto:Kudarauskas.Paul@epa.gov)>

**Subject:** Re: ELRN inquiry

Did they give a rough estimate on how much air?

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**From:** Smith, Terry

**Sent:** Friday, February 17, 2017 11:38 AM

**To:** Enders, Jhana

**Cc:** Kaelin, Lawrence; Kudarauskas, Paul; Turner, Philip

**Subject:** RE: ELRN inquiry

I know. Difficult.

The lab we contacted said they could do it, if enough air sample was collected. . . . but labs say a lot of things.

Terry

-----Original Message-----

From: Enders, Jhana

Sent: Friday, February 17, 2017 12:28 PM

To: Smith, Terry <[Smith.Terry@epa.gov](mailto:Smith.Terry@epa.gov)>

Cc: Kaelin, Lawrence <[Kaelin.Lawrence@epa.gov](mailto:Kaelin.Lawrence@epa.gov)>; Kudarauskas, Paul <[Kudarauskas.Paul@epa.gov](mailto:Kudarauskas.Paul@epa.gov)>; Turner, Philip <[Turner.Philip@epa.gov](mailto:Turner.Philip@epa.gov)>

Subject: RE: ELRN inquiry

Also, please remember biggest hurdle is getting down to residential screening level of 0.0002 ppm...and this site had 4 deaths (children). Thanks.

-----Original Message-----

From: Smith, Terry

Sent: Friday, February 17, 2017 11:10 AM

To: Enders, Jhana <[Enders.Jhana@epa.gov](mailto:Enders.Jhana@epa.gov)>

Cc: Kaelin, Lawrence <[Kaelin.Lawrence@epa.gov](mailto:Kaelin.Lawrence@epa.gov)>; Kudarauskas, Paul  
<[Kudarauskas.Paul@epa.gov](mailto:Kudarauskas.Paul@epa.gov)>

Subject: FW: ELRN inquiry

Hi Jhana:

I know you have been in contact with Larry Kaelin on locating laboratories with capability of analyzing air samples for phosphine. Larry has been in contact with ERT on capability of TAGA, and we can get back with you when we get a response back from ERT folks.

Also, I put out an enquiry through the ERLN to find capable labs. As we were getting feedback from ERLN labs, Eric Koglin with ORD also contacted me on the same issue of finding a lab. I am assuming you are in coordination with ORD on this issue. I sent the attached email to Eric on a lab responding back to our request, and I want to make sure you are getting the same information that is going to ORD. Eric said he would be calling the lab (Joe Brewer with SWRI) to get more information.

I may be getting one or two more responses back from potential ERLN labs, and I will let you know if there is any more information.

In the meantime if there is anything else we can do, please let us know.

Terry Smith

EPA Office of Emergency Management (OEM) WJC North – Room B517 Washington, D.C.

[Smith.Terry@epa.gov](mailto:Smith.Terry@epa.gov)

202-564-2908 Office

202-503-8981 Cell

-----Original Message-----

From: Brewer, Joseph H. [<mailto:joseph.brewer@swri.org>]

Sent: Friday, February 17, 2017 10:17 AM

To: Smith, Terry <[Smith.Terry@epa.gov](mailto:Smith.Terry@epa.gov)>

Subject: ELRN inquiry

Mr Smith

attached is the spreadsheet related to the ELRN phosphine request. I apologize for missing the deadline but we had to verify that the required sensitivity could be met. Please call with any questions.

Thank you

Joe Brewer

210 522-5168